Ms. Sonya Olbrantz
Mohawk Flush Doors, Inc.
402 North Sheridan
South Bend, IN 46619

Re: 141-10950
First Minor Source Modification to
Part 70 No.: T 141-7805-00058

Dear Ms.Olbrantz:

Mohawk Flush Doors, Inc. was issued a permit on November 17, 1998 for a wood door manufacturing plant. A letter requesting changes to this permit was received on May 13, 1999. Pursuant to the provisions of 326 IAC 2-7-12 a Minor Source modification to this permit is hereby approved as described in the attached Technical Support Document.

(a) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

(b) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone, and

(c) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Phillip Ritz, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham or extension (3-6878), or dial (973) 575-2555, extension 3241.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PR/EVP
cc: File - St. Joseph County
U.S. EPA, Region V
St. Joseph County Health Department
Air Compliance Section Inspector - Paul Karkiewicz
Compliance Data Section - Jerri Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

PART 70 MINOR SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT

Mohawk Flush Doors, Inc.
402 North Sheridan
South Bend, IN 46619

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T141-7805-00058	
Original Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: January 19, 1999

First Minor Source Modification 141-10950-00058	Pages Affected: 5, 6, 28, 29
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary wood door manufacturing plant.

Responsible Official:	Howard Murphy
Source Address:	402 N. Sheridan, South Bend, Indiana 46619
Mailing Address:	402 N. Sheridan, South Bend, Indiana 46619
SIC Code:	2431
County Location:	St. Joseph
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) Machining and woodworking equipment, including saws, routers, sanders, planers, hardware assembly, and a wood chipper, with a maximum capacity of 15,000 pounds per hour, controlled by a cyclone/baghouse system, identified as DC1, and exhausting to stack DCX, with captured sawdust conveyed to a storage bin.

(b) One (1) two-stage spray booth, identified as AB, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to either stack A or B;

(c) One (1) spray booth, identified as C, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack C; and

(d) One (1) spray booth, identified as D, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack D.

(e) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Space heaters, process heaters, or boilers using natural gas with heat input equal to or less than ten million (10,000,000) Btu per hour (One (1) boiler, with a capacity of 1000 Btu per hour).

(b) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) two-stage spray booth, identified as AB, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to either stack A or B;

(b) One (1) spray booth, identified as C, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack C; and

(c) One (1) spray booth, identified as D, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack D.

(d) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) Spray booths C and D shall use less than twenty-five (25) tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 (General Reduction Requirements for New Facilities) not applicable.

(b) Any change or modification which may increase the potential VOC emissions to 25 tons per year or more from spray booths A-B or E must be approved by the Office of Air Management (OAM) before such change may occur.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the PM emissions from these facilities shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the limits specified in Conditions D.1.1 and D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the VOC usage limitation contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.6 VOC Emissions

Compliance with Condition D.1.1 shall be demonstrated at the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Particulate Matter (PM)

Pursuant to 326 IAC 6-3-2 and 326 IAC 2-7, the dry filters for PM control shall be in operation at all times when the paint booths AB, C, D and E are in operation.

D.1.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray from the surface coating booth stacks A, B, C, D and E while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1.
    (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
    (2) A log of the dates of use;
    (3) The cleanup solvent usage for each month;
    (4) The total VOC usage for each month; and
    (5) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.1.8, the Permittee shall maintain a log of daily overspray observations, daily and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Minor Source Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	Mohawk Flush Doors, Inc.
Source Location:	402 North Sheridan, South Bend, IN 46619
County:	St. Joseph
SIC Code:	2431
Operation Permit No.:	T 141-7805-00058
Operation Permit Issuance Date:	November 17, 1998
Source Modification No.:	141-10950-00058
Permit Reviewer:	Phillip Ritz/EVP

The Office of Air Management (OAM) has reviewed a modification application from Mohawk Flush Doors, Inc. relating to the construction and operation of the addition of a spray booth to a wood door manufacturing plant.

History

On May 13, 1999, Mohawk Flush Doors, Inc. submitted an application to the OAM requesting to add additional surface coating lines to their existing plant. Mohawk Flush Doors, Inc. was issued a Part 70 Operating Permit T141-7805-00058 on November 17, 1998.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

(a) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

Insignificant Activities

The modification to the source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone, and

(b) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour.

Existing Approvals

The source was issued a Part 70 Operating Permit T141-7805-00058 on November 17, 1998.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
E	spray booth E	24	3	18,000	68

Recommendation

The staff recommends to the Commissioner that the Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 13, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 4.)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	10.98
PM-10	10.98
SO_2	0.00
VOC	9.60
CO	0.64
NO_x	0.76

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Glycol Ether	4.91
TOTAL	4.91

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)), for the New Emission Units and Pollution Control Equipment, of PM and PM-10 are greater than 5 tons per year and less than 25 tons per year. The potential to emit (as defined in 326 IAC 2-1.1-1(16)), for the New Emission Units and Pollution Control Equipment, of a single HAP and any combination of HAP are greater than 1 tons per year and 2.5 tons per year, respectively,

but less than 10 tons per year and 25 tons per year, respectively. Therefore, the modification is subject to the provisions of 326 IAC 2-7-10.5(d).

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Actual Emissions (tons/year)
PM	less than 250
PM-10	less than 250
SO_2	less than 100
VOC	less than 250
CO	less than 100
NO_x	less than 100

Pollutant	Actual Emissions (tons/year)
Toluene	greater than 10
Methyl ethyl ketone	less than 10
Methyl isobutyl ketone	less than 10
Xylene	less than 10
Bis (2-ethylhexyl) phthalate	less than 10
Ethylbenzene	less than 10
Lead	less than 10
TOTAL HAPs	greater than 25

(a) This existing source is a major stationary source because the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year.

(b) These emissions were based on the Part 70 Operating Permit T141-7805-00058 on November 17, 1998.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Any Single HAP	Total HAPs

One (1) spray booth, identified as E	1.64	1.64	0.00	9.56	0.00	0.00	4.91 (Glycol Ether)	4.91
natural gas-fired air heaters	0.06	0.06	0.00	0.04	0.64	0.76	0.00	0.00
Total Emissions	1.70	1.70	0.00	9.60	0.64	0.76	4.91 (Glycol Ether)	4.91

Note: Pursuant to the Part 70 Permit T 141-7805-00058, which was issued on November 17, 1998, this modification relating to the construction and operation of a spray booth, will not increase the source's potential to emit of PM and VOC to greater than 250 tons per year. Pursuant to Part 70 Permit Part 70 Permit T 141-7805-00058, which was issued on November 17, 1998, the source will maintain its less than 250 ton per year PM and VOC limit. The potential to emit HAPs is limited to less than 10 tons per year for a single HAP and 25 tons per year for any combination of HAPs. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) will not apply to this facility.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The surface coating booth is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart JJ because it coats wooden doors. Wooden doors are not wood furniture as defined by this NESHAP.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

There are no new State Rules applicable on a source-wide basis due to this First Minor Source Modification. All source-wide State Rules cited in Part 70 Operating Permit T 141-7805-00058, which was issued on November 17, 1998, continue to apply to this source.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to the Part 70 Permit T 141-7805-00058, which was issued on November 17, 1998, this modification relating to the construction and operation of a spray booth, will not increase the source's potential to emit of PM and VOC to greater than 250 tons per year. Pursuant to Part 70 Permit Part 70 Permit T 141-7805-00058, which was issued on November 17, 1998, the source

will maintain its less than 250 ton per year PM and VOC limit. The potential to emit HAPs is limited to less than 10 tons per year for a single HAP and 25 tons per year for any combination of HAPs. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) will not apply to this facility.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the spray booth shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the spray booths are in operation, in order to comply with this limit.

326 IAC 8-2 (Surface Coating Emission Limitations)

Although the surface coating booths have actual emissions greater than 15 pounds per day and are located in St. Joseph County, there are no specific 326 IAC 8-2 rules which apply to the surface coating of wooden doors. 326 IAC 8-2-12 (Wood furniture and cabinet coating) also does not apply to this source as wooden doors are not considered wood furnishings. Therefore, this rule does not apply.

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

The total potential to emit VOC from the surface coating booth E, which was constructed in 1999, is less than 25 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 8-1-6 (Best Available Control Technology) does not apply to this booth.

Compliance Requirements

Permits issued under 326 IAC 2-7are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

(1) The spray booths have applicable compliance monitoring conditions as specified below:

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take

response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, evidence of overspray emission, or other abnormal emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

These monitoring conditions are necessary because the dry filters for the spray booth must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

(a) This modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations. (Appendix A, page 3 of 4.)

Changes Proposed

The following changes have been made to the Part 70 Operating Permit (T 141-7805-00058) :

(a) Condition A.2, Page 5 of 38
Add to the listing of emission units the following:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) Machining and woodworking equipment, including saws, routers, sanders, planers, hardware assembly, and a wood chipper, with a maximum capacity of 15,000 pounds per hour, controlled by a cyclone/baghouse system, identified as DC1, and exhausting to stack DCX, with captured sawdust conveyed to a storage bin.

(b) One (1) two-stage spray booth, identified as AB, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to either stack A or B;

(c) One (1) spray booth, identified as C, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack C; and

(d) One (1) spray booth, identified as D, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack D.

(e) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

(b) Section D.1, add to the listing of emission units the following:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]
(a) One (1) two-stage spray booth, identified as AB, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to either stack A or B;
(b) One (1) spray booth, identified as C, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack C; and
(c) One (1) spray booth, identified as D, with a maximum capacity of 101.25 units per hour, utilizing a high volume low pressure (HVLP) application system, with particulate matter overspray controlled by dry filters, and exhausting to stack D.
(d) One (1) spray booth, identified as E, with a maximum capacity of 101.25 units (doors) per hour, utilizing a high volume low pressure (HVLP) application system with particulate matter overspray controlled by dry filters and exhausting to stack E. The booth will have two (2) spray guns; however only one (1) gun will be used at any one time. The second gun is for back-up only.

(c) Conditions D.1.1, add to the listing of emission units the following:

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) Spray booths C and D shall use less than twenty-five (25) tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 (General Reduction Requirements for New Facilities) not applicable.
(b) Any change or modification which may increase the potential VOC emissions to 25 tons per year or more from spray booth**s** A-B **or E** must be approved by the Office of Air Management (OAM) before such change may occur.

(c) Conditions D.1.7 and D.1.8, add to the listing of emission units the following:

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Particulate Matter (PM)

Pursuant to 326 IAC 6-3-2 and 326 IAC 2-7, the dry filters for PM control shall be in operation at all times when the paint booths AB, C**,** ~~and~~ D **and E** are in operation.

D.1.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray from the surface coating booth stacks A, B, C**,** ~~and~~ D **and E** while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Conclusion

The operation of this addition of a spray booth to a wood door manufacturing plant shall be subject to the conditions of the attached proposed Minor Source Modification No.: 141-10950-00058.

Appendix A: Emission Calculations

Company Name: Mohawk Flush Doors, Inc.
Address City IN Zip: 402 N. Sheridan, South Bend, IN 46619
CP#: T141-7805-00058
Plt ID: 141-00058
Permit Reviewer: Phillip Ritz/EVP
Date: May 13, 1999

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Spray Booth E	Natural Gas Forced Air Heaters	**TOTAL**
PM	10.92	0.06	10.98
PM10	10.92	0.06	10.98
SO2	0.00	0.00	0.00
NOx	0.00	0.76	0.76
VOC	9.56	0.04	9.60
CO	0.00	0.64	0.64
total HAPs	4.91	0.00	4.91
worst case single HAP	(Glycol Ether) 4.91	0.00	(Glycol Ether) 4.91

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Spray Booth E	Natural Gas Forced Air Heaters	**TOTAL**
PM	1.64	0.06	1.70
PM10	1.64	0.06	1.70
SO2	0.00	0.00	0.00
NOx	0.00	0.76	0.76
VOC	9.56	0.04	9.60
CO	0.00	0.64	0.64
total HAPs	4.91	0.00	4.91
worst case single HAP	(Glycol Ether) 4.91	0.00	(Glycol Ether) 4.91

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Mohawk Flush Doors, Inc.
Address City IN Zip: 402 N. Sheridan, South Bend, IN 46619
CP#: T141-7805-00058
Plt ID: 141-00058
Permit Reviewer: Phillip Ritz/EVP
Date: May 13, 1999

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Off White WB Enamel	10.7	50.76%	44.2%	6.6%	56.7%	34.11%	0.02188	101.250	1.62	0.70	1.55	37.25	6.80	12.76	2.05	75%
Clear Gloss WB Topcoat	8.4	66.69%	55.0%	11.7%	55.7%	30.15%	0.02188	101.250	2.23	0.98	2.18	52.37	9.56	6.82	3.27	75%
Maple W/Bourne G/Coat	10.3	56.08%	49.9%	6.2%	61.9%	28.81%	0.02188	101.250	1.66	0.63	1.40	33.68	6.15	10.92	2.20	75%
TDSB WB Gloss Toner	8.7	59.95%	54.0%	6.0%	57.5%	35.34%	0.02188	101.250	1.22	0.52	1.15	27.63	5.04	8.47	1.47	75%
TDSR WB Gloss Toner	8.8	58.75%	52.1%	6.6%	55.0%	37.00%	0.02188	101.250	1.30	0.58	1.29	31.03	5.66	8.80	1.58	75%

State Potential Emissions **Add worst case coating to all solvents** **2.18** **52.37** **9.56** **10.92**

Control Efficiency:		Controlled	Controlled	Controlled	Controlled
VOC	PM	VOC lbs per Hour	VOC lbs per Day	VOC tons per Year	PM tons/yr
0.00%	85.00%	**2.18**	**52.37**	**9.56**	**1.64**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Mohawk Flush Doors, Inc.
Address City IN Zip: 402 N. Sheridan, South Bend, IN 46619
CP#: T141-7805-00058
Plt ID: 141-00058
Permit Reviewer: Phillip Ritz/EVP
Date: May 13, 1999

Material	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Glycol Ether	Glycol Ether (ton/yr)
Off White WB Enamel	10.7	0.02188	101.25	4.00%	4.15
Clear Gloss WB Topcoat	8.4	0.02188	101.25	6.00%	4.91
Maple W/Bourne G/Coat	10.3	0.02188	101.25	0.00%	0.00
TDSB WB Gloss Toner	8.7	0.02188	101.25	3.00%	2.54
TDSR WB Gloss Toner	8.8	0.02188	101.25	4.00%	3.41

Total State Potential Emissions **Add worst case coating to all solvents** **4.91**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
Natural Gas Combustion
MM Btu/hr 0.3 - < 100

Company Name: Mohawk Flush Doors, Inc.
Address City IN Zip: 402 N. Sheridan, South Bend, IN 46619
CP#: T141-7805-00058
Plt ID: 141-00058
Permit Reviewer: Phillip Ritz/EVP
Date: May 13, 1999

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.7	15.2

Heat Input Capacity includes:
three (3) forced air natural gas fired heaters, each with a maximum rated heat input of .58 mmBtu per hour (1.74 mmBtu total)

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.06	0.06	0.00	0.76	0.04	0.64

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 50, Flue gas recirculation = 32
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 emis
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton